AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 8, 10, and 12 as indicated below.

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[deletion]]):

1. (Currently Amended) A transceiver comprising:

a receiver receiving a signal and generating a receiver signal having a receiver bandwidth;

a receiver direct converter translating the receiver~~a received~~ signal to a baseband of the receiver~~received~~ signal and digitizing the translated, receiver~~received~~ signal;

an adaptive canceller comprising a reference direct converter, the reference direct converter outputting a digitized transmit signal reference of a spectral energy of a transmitter, the digitized transmit signal reference having the receiver bandwidth~~within the bandwidth of a receiver~~; and

a matched filter, wherein the receiver direct converter, the reference direct converter, and the matched filter suppress the spectral energy of the transmitter from~~within~~ the receiver signal~~bandwidthof the receiver~~.

2. (Original) The transceiver of Claim 1, wherein the transceiver is a full duplex transceiver.

3. (Original) The transceiver of Claim 1, further comprising a transmit and receive antenna radiator.

4. (Original) The transceiver of Claim 1, further comprising a transmit antenna radiator and a receive antenna radiator.

5. (Original) The transceiver of Claim 1, where the receiver direct converter, the reference direct converter, and the matched filter have approximately 90 dB attenuation.

6. (Original) The transceiver of Claim 1, wherein the receiver direct converter has a sampling rate approximately equal to that of the carrier frequency of interest.

7. (Original) The transceiver of Claim 1, wherein the reference direct converter has a sampling rate approximately equal to that of the carrier frequency of interest.

8. (Currently Amended) The transceiver of Claim 1, wherein the canceller further comprises an adaptive digital transversal filter adapted to align an amplitude and a phase of the

digitized transmit signal reference in a reference path with a transmit signal in a leakage receiver path, the adaptive digital transversal filter outputting [[an]]a compensated digitized transmit signal reference.

9. (Original) The transceiver of Claim 1, wherein the transceiver is adapted to cancel interference from other co-sited transmit antennas.

10. (Currently Amended) A method of attenuating a transmitter signal spectrum within a bandwidth of a receiver, the method comprising:

digitizing a received signal from a receiver, the received signal having a receiver bandwidth, the received signal~~which is~~ corrupted by components of a transmit signal;

creating a digitized reference transmit signal of the transmit signal, the digitized reference transmit signal having~~within~~ the receiver bandwidth~~of the receiver~~;

aligning the digitized reference transmit signal in amplitude, phase and time delay with the digitized received signal;

subtracting the digitized reference transmit signal from the digitized received signal to form a residue; and

suppressing a transmitter spectral signal power [[of]]from the residue within the receiver bandwidth~~of the receiver~~.

11. (Original) The method of Claim 10, further comprising adjusting the transmit signal based on the residue determined by subtracting the digitized reference transmit signal from the digitized received signal.

12. (Currently Amended) A transceiver comprising:

a duplexer coupled to an antenna;

a receiver having a receiver bandwidth, wherein the receiver receives ~~receiving~~ a first signal from the duplexer, the first signal having the receiver bandwidth;

a transmitter sending a second signal to the duplexer, the second signal having the receiver bandwidth; and

an adaptive, digital, coherent spectral canceller coupled to the receiver and the transmitter, the canceller attenuating a signal spectrum leakage of the second signal ~~with the receiver~~ within [[a]]the receiver bandwidth ~~of the first signal~~.